



## Department of Energy

Brookhaven Site Office

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Upton, New York 11973

MAR 08 2019

Ms. Sharon Hartzell  
Federal Facilities Section  
U.S. EPA - Region II  
290 Broadway - 18<sup>th</sup> Floor  
New York, New York 10007-1866

Mr. Brian Jankauskas  
New York State Department of  
Environmental Conservation  
Division of Environmental Remediation  
625 Broadway -12<sup>th</sup> Floor  
Albany, New York 12233

Dear Ms. Hartzell and Mr. Jankauskas:

SUBJECT: BROOKHAVEN NATIONAL LABORATORY (BNL) ADDENDUM TO THE  
PHASE 3 WORK PLAN FOR CHARACTERIZATION OF PER- AND  
POLYFLUOROALKYL SUBSTANCES (PFAS) AND RESPONSE TO  
COMMENTS

Reference: Letter from B. Jankauskas, NYSDEC, to R. Gordon, SC-BHSO, Subject:  
Brookhaven National Laboratory (Site ID: 152009), dated December 27, 2018

Attached for your review is a copy of the Addendum to the Phase 3 Work Plan for continued characterization of PFAS at BNL. Also attached are responses to the above referenced letter.

The majority of the Phase 3 sampling effort has been completed, and analytical results confirmed the presence of PFAS at BNL's southern boundary and downgradient of the Sewage Treatment Plant. The goal of this addendum is to describe the next steps in the investigation process. This will include the recent sampling of 33 individual groundwater monitoring wells located along the southern boundary and the planned installation of 11 temporary Geoprobe wells.

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If you have any questions please contact Jerry Granzen, of my staff, at (631) 344-4089.

Sincerely,



Robert P. Gordon  
Site Manager

Attachments:

1. BNL Phase 3 Addendum
2. BNL Response to Comments

cc: J. Swartwout, NYSDEC  
T. Papura, NYSDEC  
D. O'Hehir, NYSDOH  
J. Collins, NYSDOH  
S. Karpinski, NYSDOH  
A. Juchatz, SCDHS  
A. Rapiejko, SCDHS

G. Granzen, SC-BHSO  
S. Coleman, BSA  
W. Dorsch, BSA  
R. Howe, BSA  
D. Paquette, BSA  
J. Remien, BSA

BNL Groundwater Protection Group  
*Responses to NYSDEC Comments on Phase 3 Work Plan for Characterization of Per- and Polyfluoroalkyl Substances (PFAS)*

Comment Number	Section	Comment	Response
<b>Letter from Brian Jankauskas (NYSDEC) to Robert Gordon (DOE) Dated December 27, 2018.</b>			
1	General Comment	Phase 1 investigations conducted at the facility have identified PFAS contamination at suspected source areas and Phase 2 investigations have further assessed these suspected source areas. This step process agrees with Brookhaven National laboratory (BNL) stated position that the preferred method for conducting the PFAS investigation is from the suspected source out. The proposed Phase 3 plan includes the evaluation of PFAS at the on-site treatment systems, sewage treatment plant, and landfills. Collection of samples from the extraction wells will be obtained from the site boundary; however, these samples will likely be diluted by the pumping process which will limit the PFAS investigation. As a result, the proposed plan does not progress the on-site investigation completed during Phase 2. The State recommends including select monitoring wells or temporary wells that are located within the extraction well network to properly evaluate PFAS within the aquifer near the extraction well locations. This information will provide an indication if PFAS has migrated towards the site boundary and can also be used with the extraction well data to better understand how the extraction wells correlate with the aquifer.	BNL has completed most of the sampling effort defined in the Phase 3 work plan. The analytical results received to date have confirmed the presence of PFAS at the southern site boundary and downgradient of the Sewage Treatment Plant (STP). Because of these confirmed detections, BNL has prepared an addendum to the Phase 3 work plan as a next step in the investigation process. As described in the addendum, BNL has recently sampled 33 individual monitoring wells located along the southern boundary and is preparing to install 11 temporary Geoprobe wells along the southern boundary and downgradient of the STP.
2	Table 10	Table 10, sample preservation – Recommend that the samples be maintained at 4 degrees Celsius plus/minus 2 degrees, which is standard.	The sample temperature requirements are defined in EPA Method 537.1 (USEPA, 2018). As stated, samples must not exceed 10°C during the first 48 hours after collection, then be maintained by the analytical laboratory at ≤6°C (but not frozen) until extraction. BNL samples typically arrive at GEL Laboratories at temperatures of 1 to 4 °C.

BNL Groundwater Protection Group  
*Responses to NYSDEC Comments on Phase 3 Work Plan for Characterization of Per- and Polyfluoroalkyl Substances (PFAS)*

<b>Comment Number</b>	<b>Section</b>	<b>Comment</b>	<b>Response</b>
3	5	Include submission of a NYSDEC electronic data deliverable, see link blow. <a href="https://www.dec.ny.gov/chemical/62440.html">https://www.dec.ny.gov/chemical/62440.html</a>	At the end of this characterization effort, BNL will submit all PFAS data to the NYSDEC as an electronic data deliverable (EDD) package in the required format.